Fig. 1

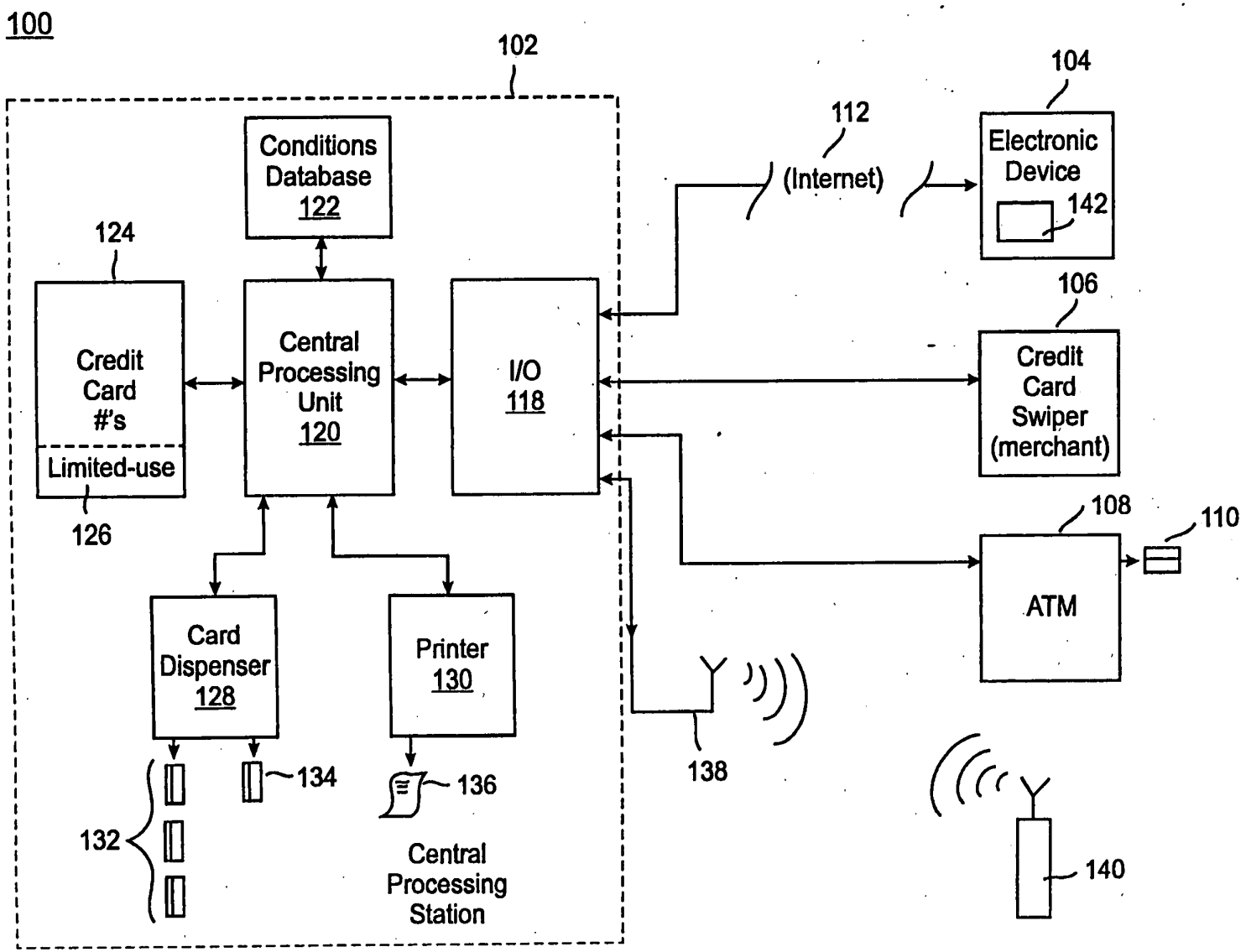

100
102
Conditions Database 122
124
Credit Card #'s
Limited-use
126
Central Processing Unit 120
I/O 118
112
(Internet)
104
Electronic Device
142
106
Credit Card Swiper (merchant)
108
110
ATM
Card Dispenser 128
Printer 130
132
134
136
Central Processing Station
138
140

Fig. 2

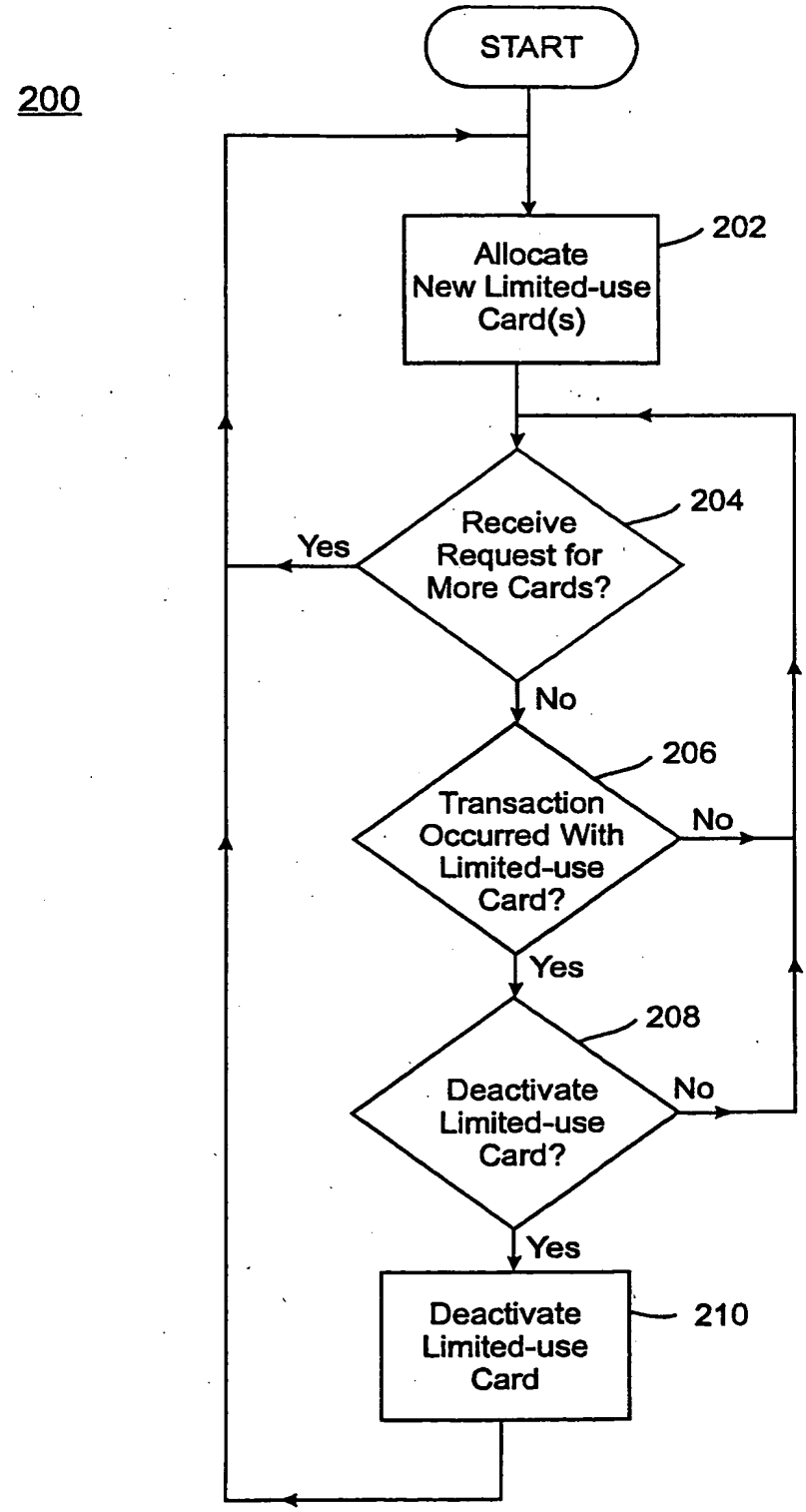

200
START
Allocate New Limited-use Card(s)
202
Receive Request for More Cards?
204
Yes
No
Transaction Occurred With Limited-use Card?
206
No
Yes
Deactivate Limited-use Card?
208
No
Yes
Deactivate Limited-use Card
210

Fig. 3

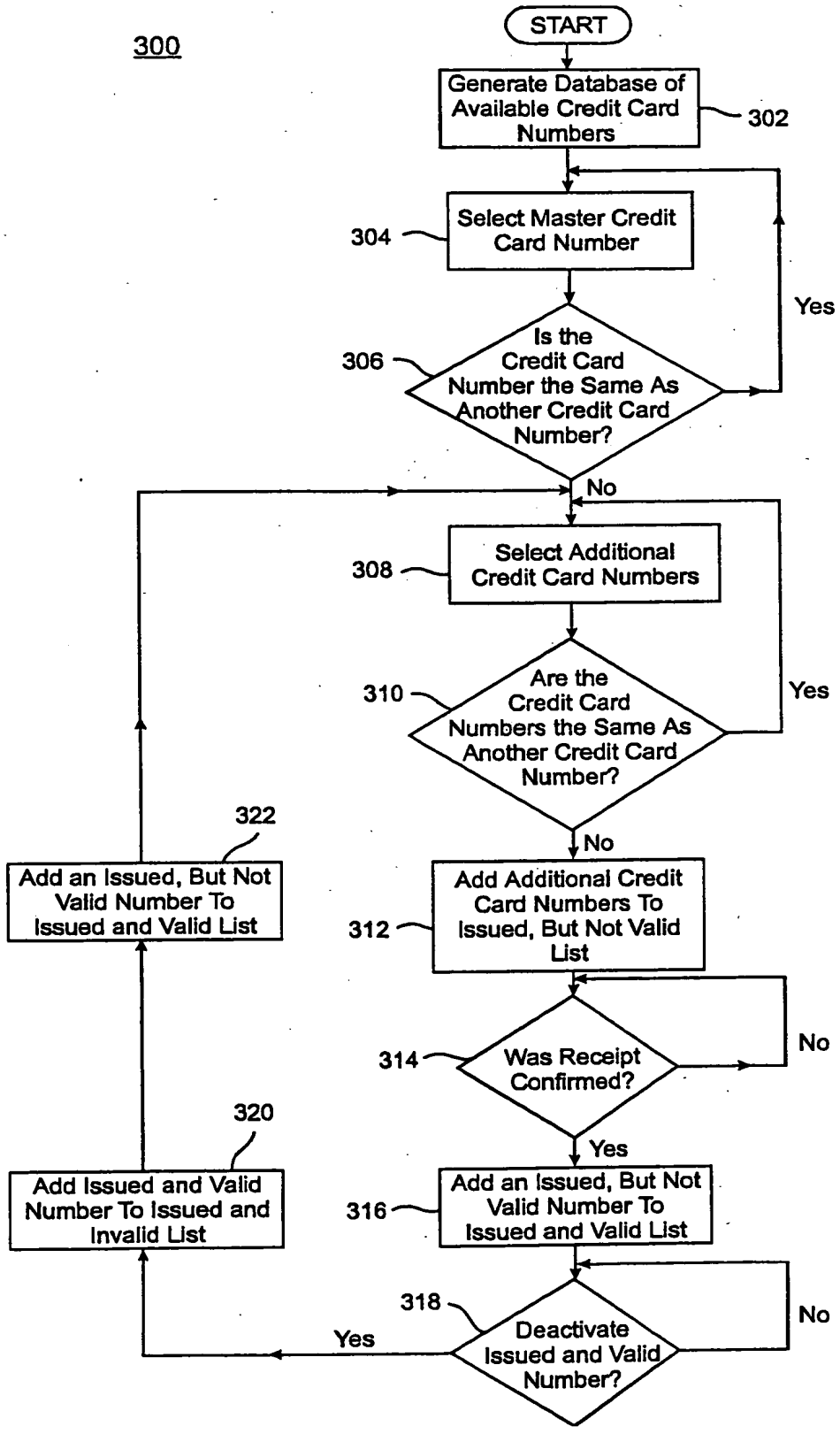

300
START
Generate Database of Available Credit Card Numbers
302
Select Master Credit Card Number
304
Is the Credit Card Number the Same As Another Credit Card Number?
306
Yes
No
Select Additional Credit Card Numbers
308
Are the Credit Card Numbers the Same As Another Credit Card Number?
310
Yes
No
Add Additional Credit Card Numbers To Issued, But Not Valid List
312
Was Receipt Confirmed?
314
No
Yes
Add an Issued, But Not Valid Number To Issued and Valid List
316
Deactivate Issued and Valid Number?
318
No
Yes
Add Issued and Valid Number To Issued and Invalid List
320
Add an Issued, But Not Valid Number To Issued and Valid List
322

Fig. 4

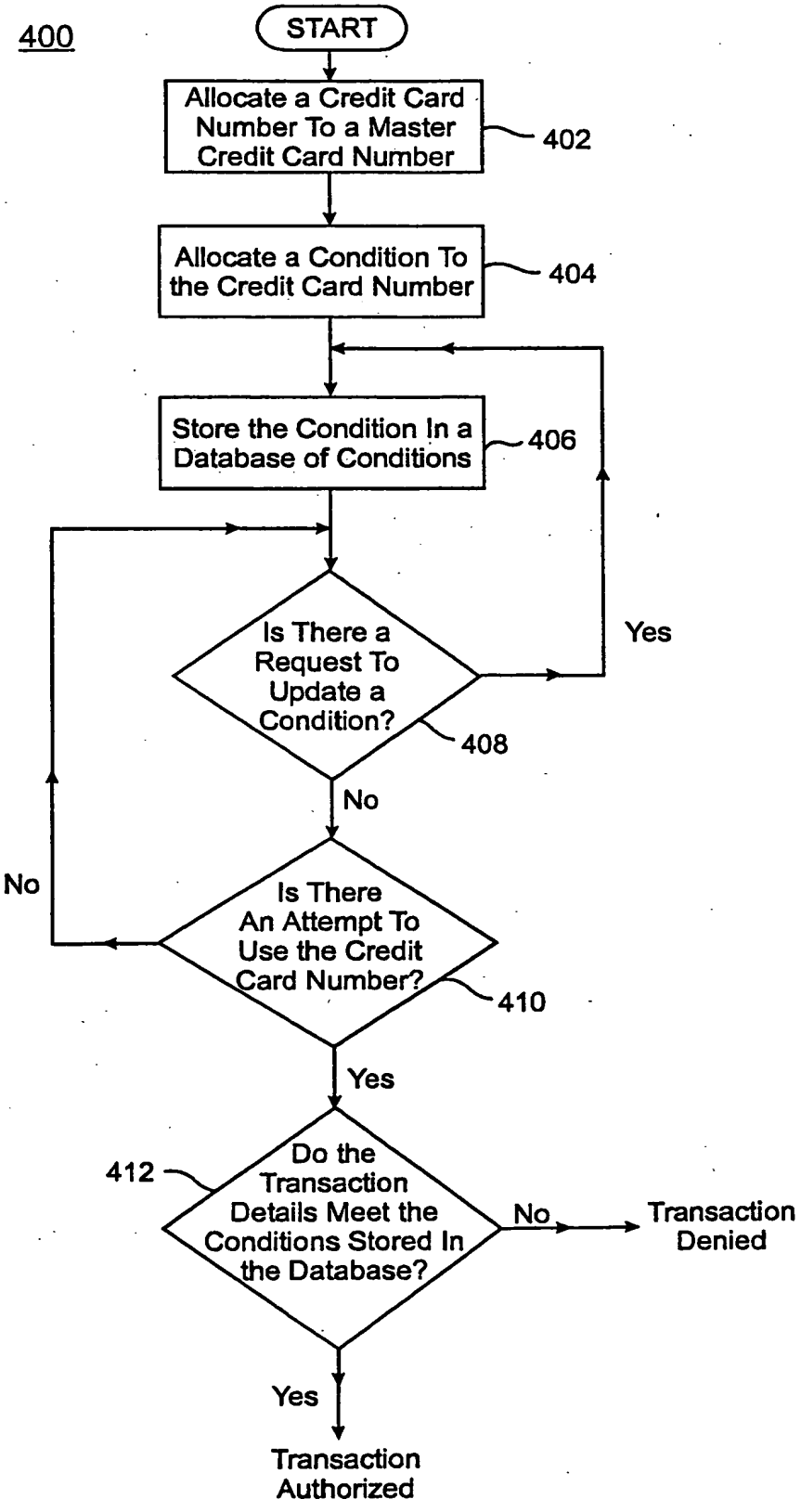

400
START
Allocate a Credit Card Number To a Master Credit Card Number
402
Allocate a Condition To the Credit Card Number
404
Store the Condition In a Database of Conditions
406
Is There a Request To Update a Condition?
408
Yes
No
Is There An Attempt To Use the Credit Card Number?
410
No
Yes
412
Do the Transaction Details Meet the Conditions Stored In the Database?
No
Transaction Denied
Yes
Transaction Authorized

Fig. 5

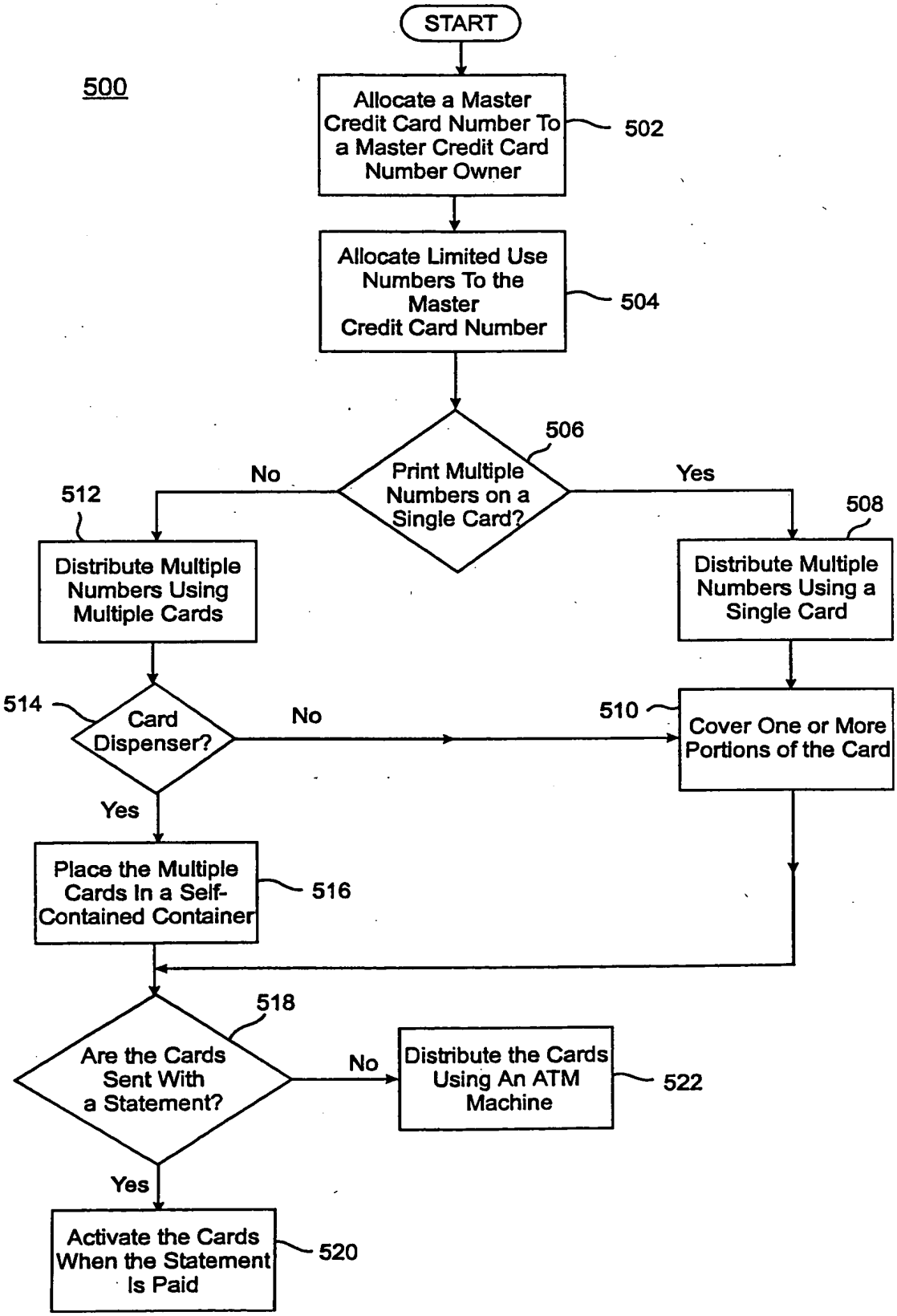

500
START
Allocate a Master Credit Card Number To a Master Credit Card Number Owner
502
Allocate Limited Use Numbers To the Master Credit Card Number
504
Print Multiple Numbers on a Single Card?
506
No
Yes
512
508
Distribute Multiple Numbers Using Multiple Cards
Distribute Multiple Numbers Using a Single Card
514
Card Dispenser?
No
510
Cover One or More Portions of the Card
Yes
Place the Multiple Cards In a Self-Contained Container
516
518
Are the Cards Sent With a Statement?
No
Distribute the Cards Using An ATM Machine
522
Yes
Activate the Cards When the Statement Is Paid
520

Fig. 6

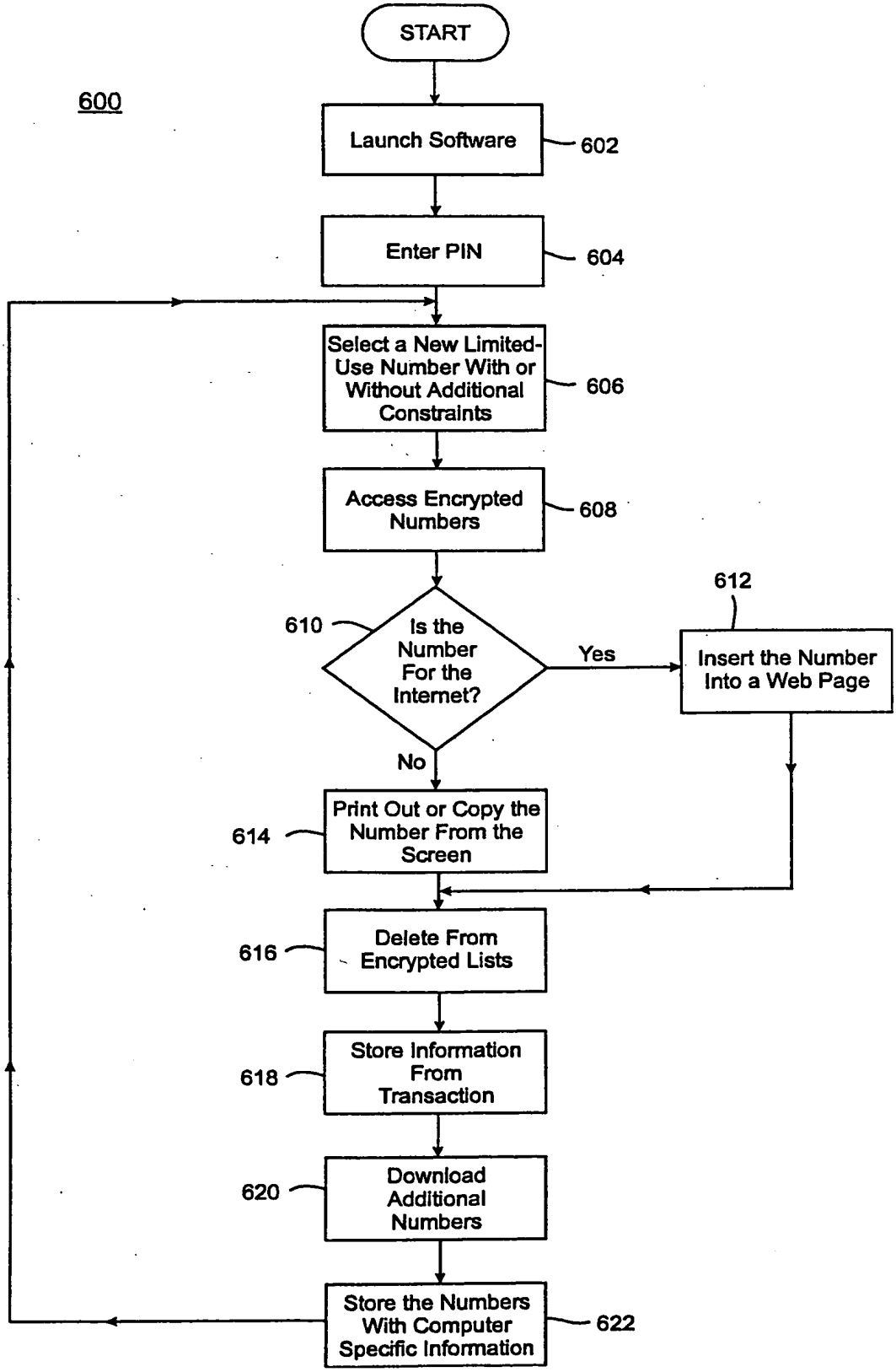

600
START
Launch Software
602
Enter PIN
604
Select a New Limited-Use Number With or Without Additional Constraints
606
Access Encrypted Numbers
608
610
Is the Number For the Internet?
Yes
612
Insert the Number Into a Web Page
No
614
Print Out or Copy the Number From the Screen
616
Delete From Encrypted Lists
618
Store Information From Transaction
620
Download Additional Numbers
Store the Numbers With Computer Specific Information
622

Fig. 7

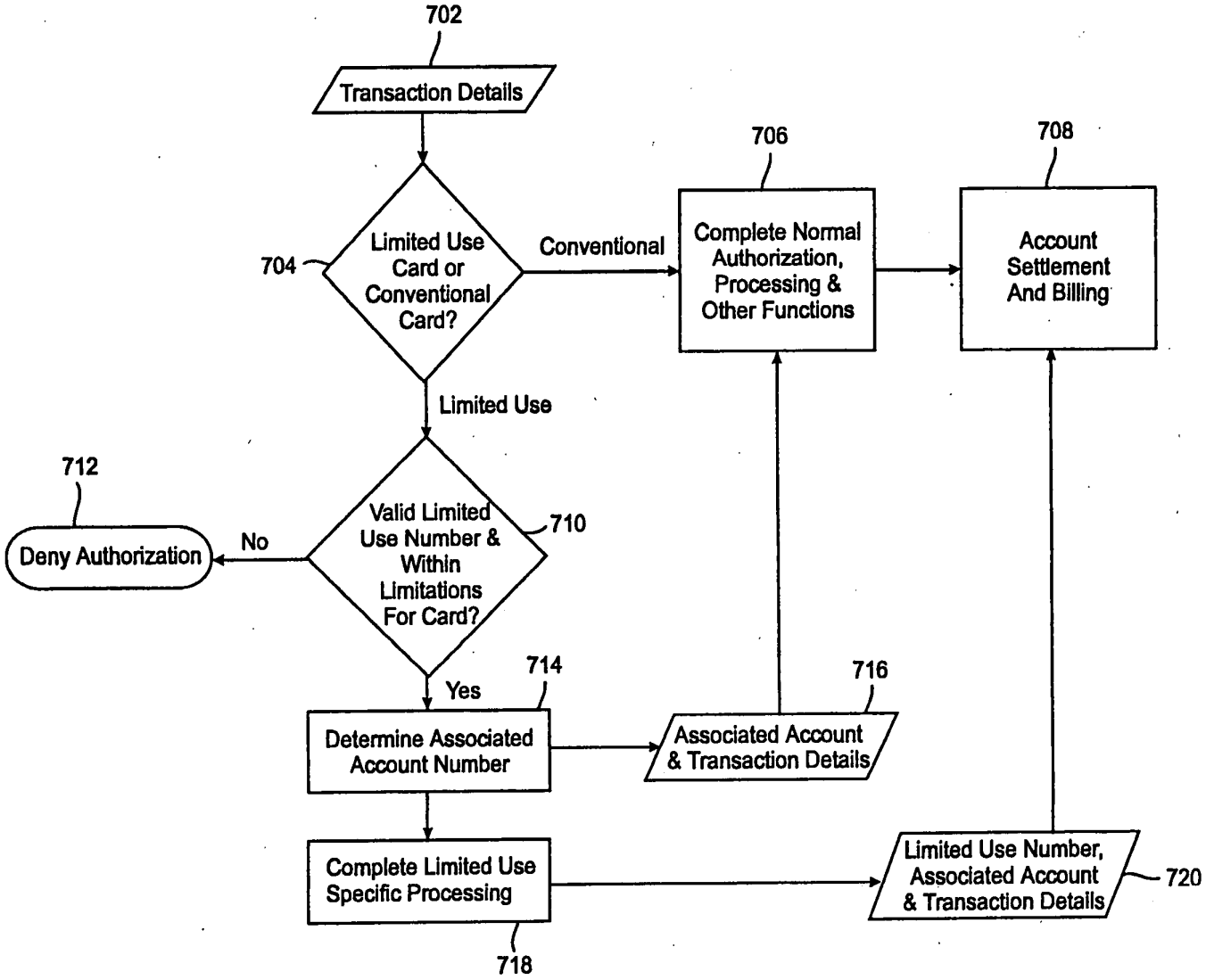

702
Transaction Details
706
708
Limited Use Card or Conventional Card?
704
Conventional
Complete Normal Authorization, Processing & Other Functions
Account Settlement And Billing
Limited Use
712
Valid Limited Use Number & Within Limitations For Card?
710
Deny Authorization
No
714
716
Yes
Determine Associated Account Number
Associated Account & Transaction Details
Complete Limited Use Specific Processing
Limited Use Number, Associated Account & Transaction Details
720
718

Fig. 8

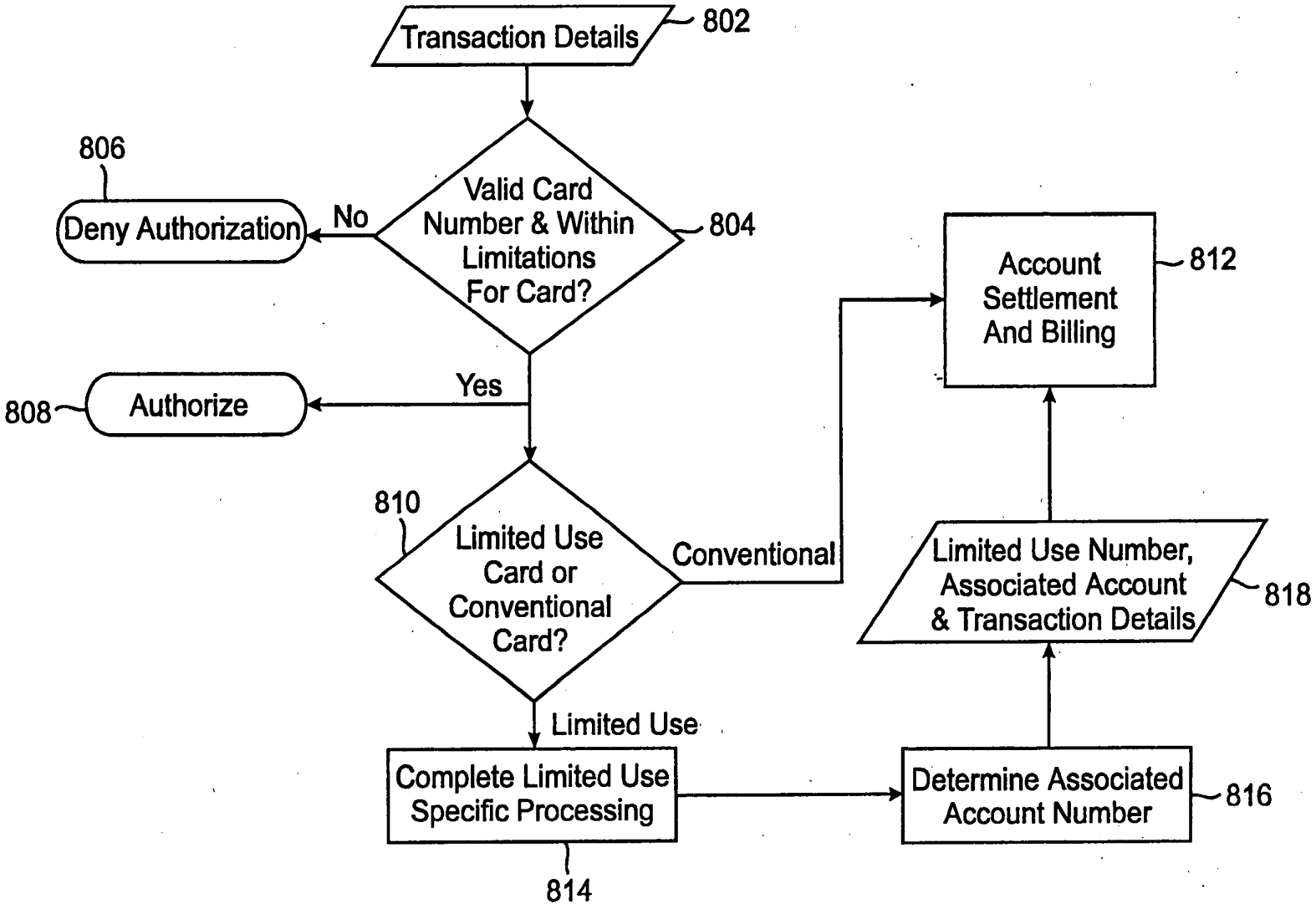

Transaction Details
802
Valid Card Number & Within Limitations For Card?
804
No
Deny Authorization
806
Yes
Authorize
808
Limited Use Card or Conventional Card?
810
Conventional
Account Settlement And Billing
812
Limited Use
Complete Limited Use Specific Processing
814
Determine Associated Account Number
816
Limited Use Number, Associated Account & Transaction Details
818

FIG. 9

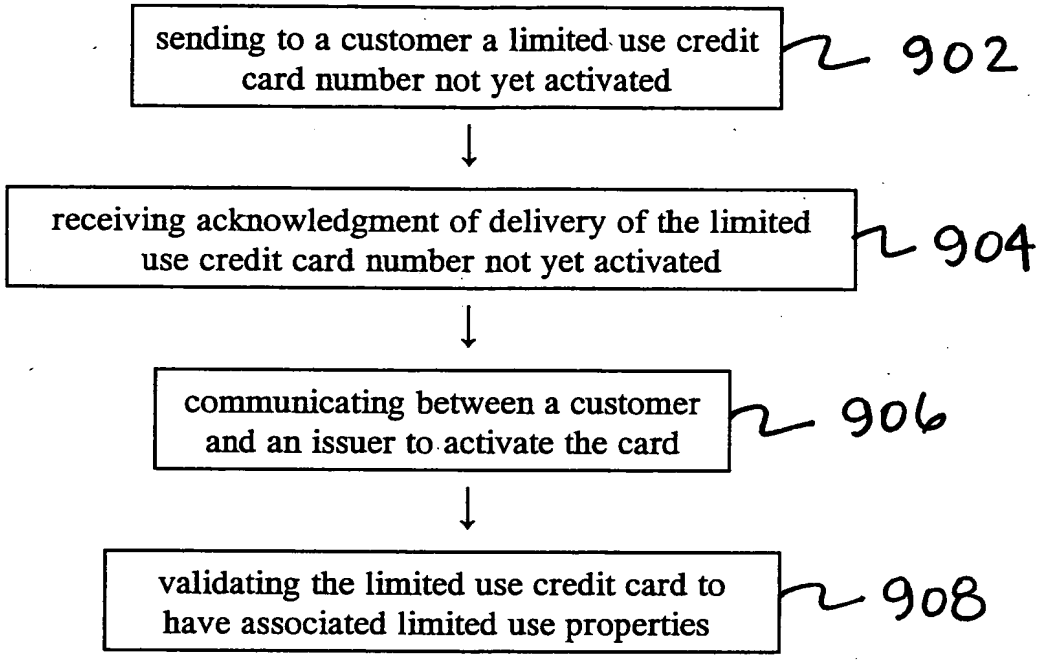
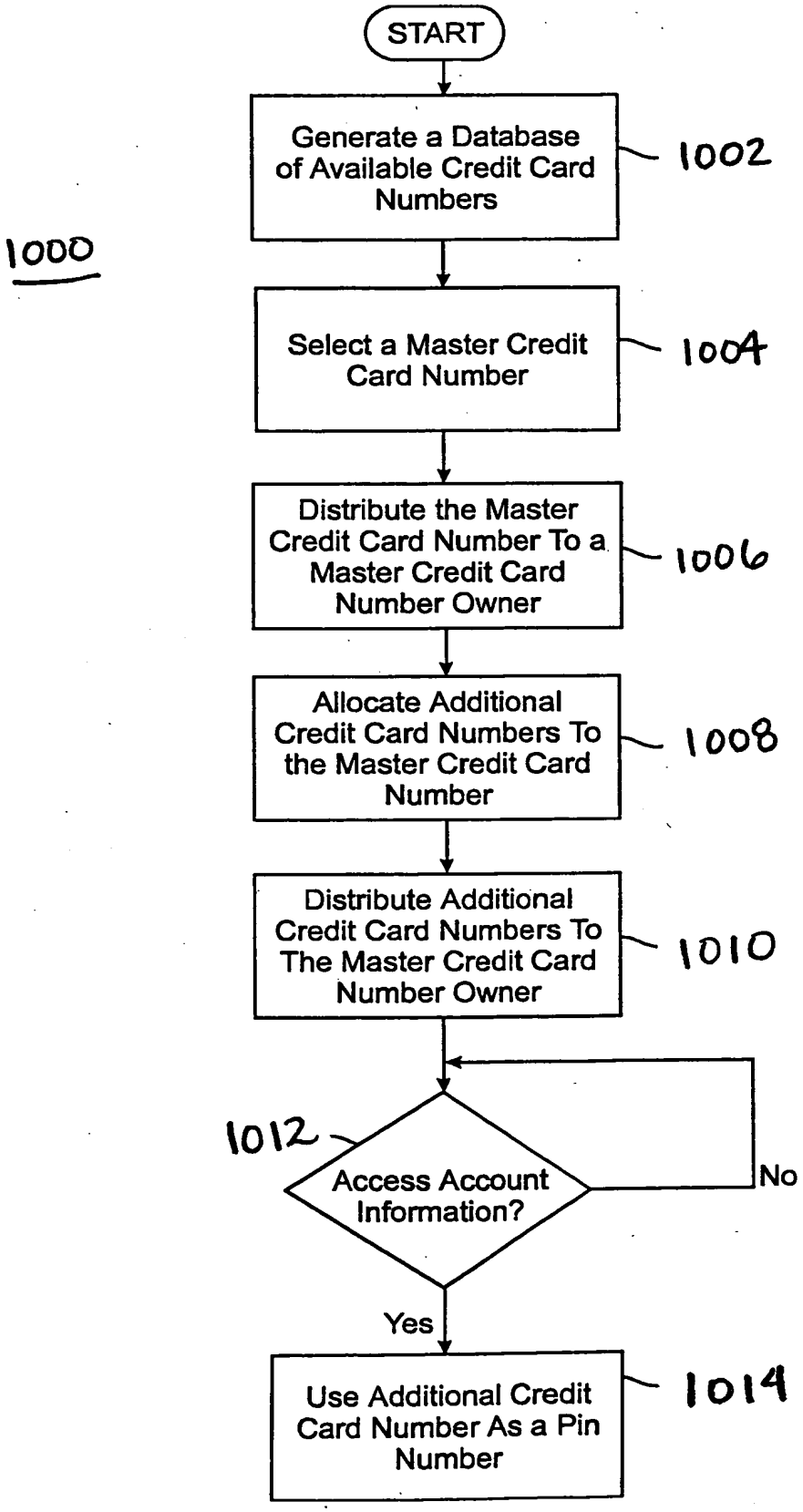

sending to a customer a limited use credit card number not yet activated
902
receiving acknowledgment of delivery of the limited use credit card number not yet activated
904
communicating between a customer and an issuer to activate the card
906
validating the limited use credit card to have associated limited use properties
908

FIG. 10


START
Generate a Database of Available Credit Card Numbers
1002
1000
Select a Master Credit Card Number
1004
Distribute the Master Credit Card Number To a Master Credit Card Number Owner
1006
Allocate Additional Credit Card Numbers To the Master Credit Card Number
1008
Distribute Additional Credit Card Numbers To The Master Credit Card Number Owner
1010
1012
Access Account Information?
No
Yes
Use Additional Credit Card Number As a Pin Number
1014

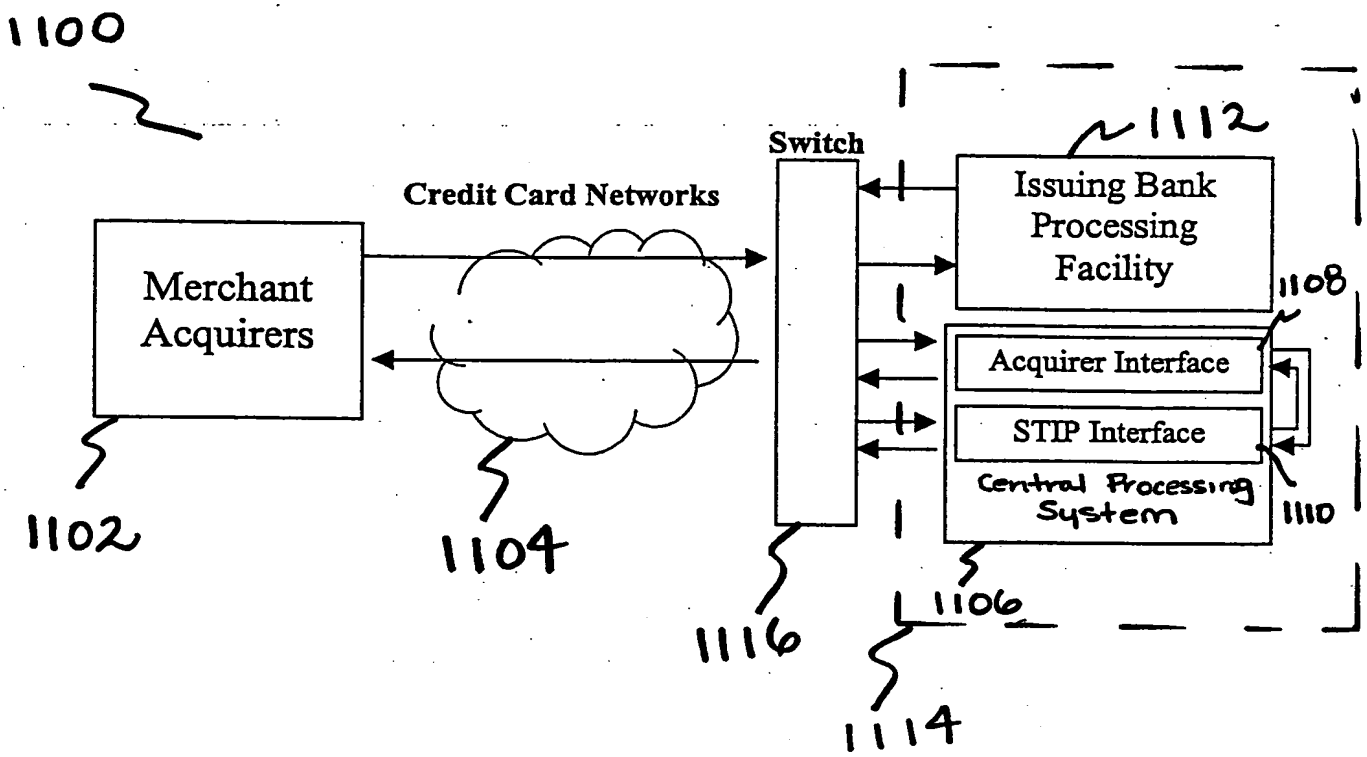

1100
Switch
1112
Credit Card Networks
Issuing Bank Processing Facility
Merchant Acquirers
1108
Acquirer Interface
STIP Interface
Central Processing System
1110
1102
1104
1106
1116
1114

FIG. 11

FIG. 12

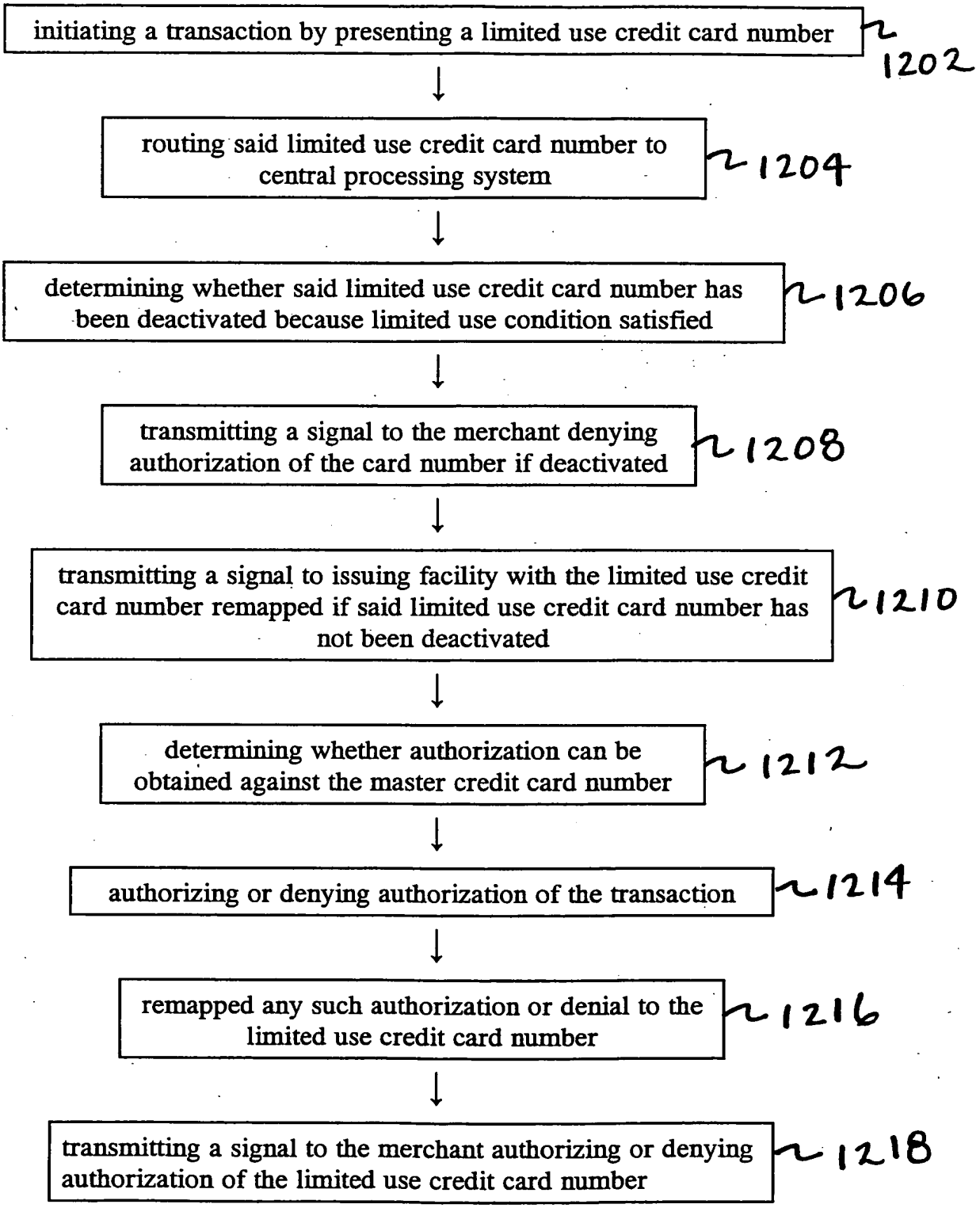
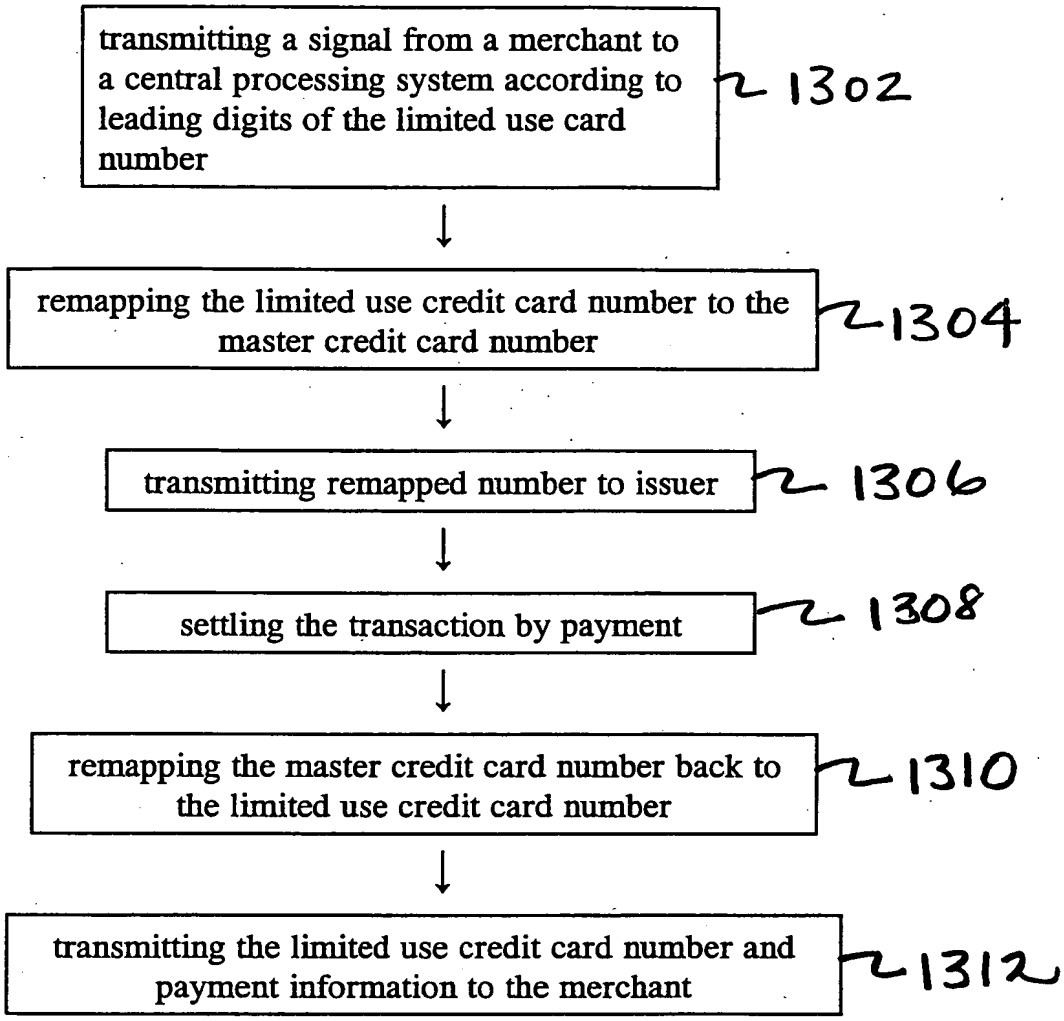

initiating a transaction by presenting a limited use credit card number
1202
routing said limited use credit card number to central processing system
1204
determining whether said limited use credit card number has been deactivated because limited use condition satisfied
1206
transmitting a signal to the merchant denying authorization of the card number if deactivated
1208
transmitting a signal to issuing facility with the limited use credit card number remapped if said limited use credit card number has not been deactivated
1210
determining whether authorization can be obtained against the master credit card number
1212
authorizing or denying authorization of the transaction
1214
remapped any such authorization or denial to the limited use credit card number
1216
transmitting a signal to the merchant authorizing or denying authorization of the limited use credit card number
1218

FIG. 13


transmitting a signal from a merchant to a central processing system according to leading digits of the limited use card number
1302
remapping the limited use credit card number to the master credit card number
1304
transmitting remapped number to issuer
1306
settling the transaction by payment
1308
remapping the master credit card number back to the limited use credit card number
1310
transmitting the limited use credit card number and payment information to the merchant
1312

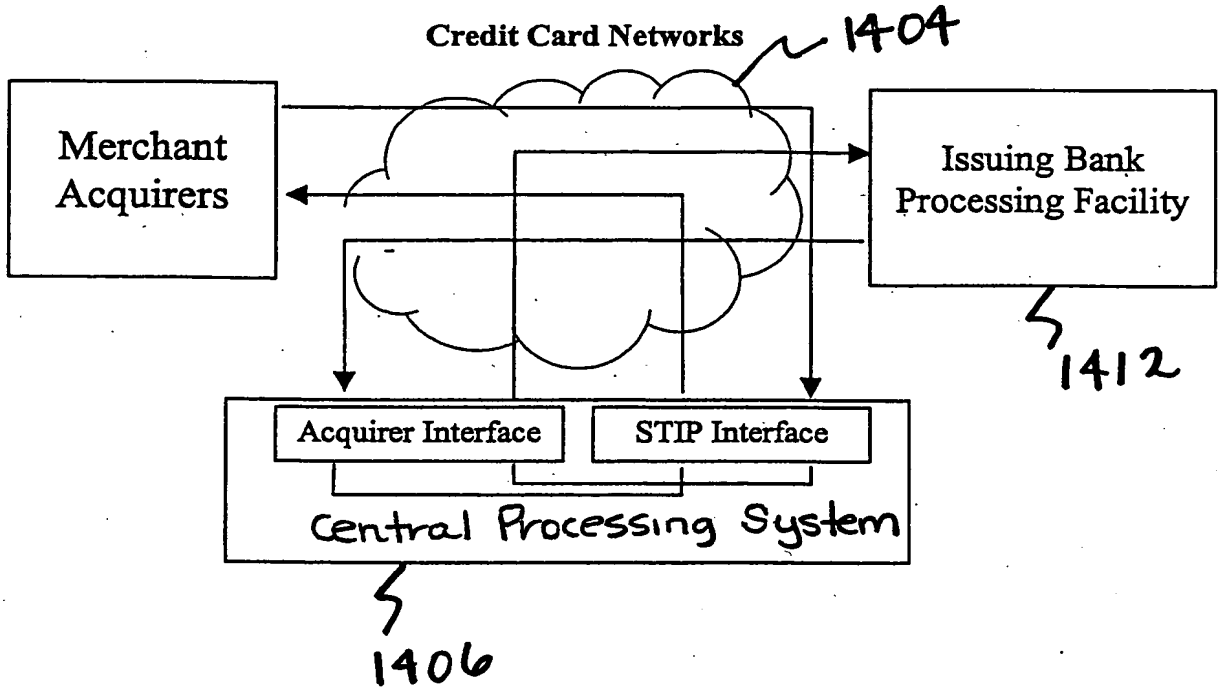

Credit Card Networks
1404
Merchant Acquirers
Issuing Bank Processing Facility
1412
Acquirer Interface
STIP Interface
Central Processing System
1406

Fig. 14

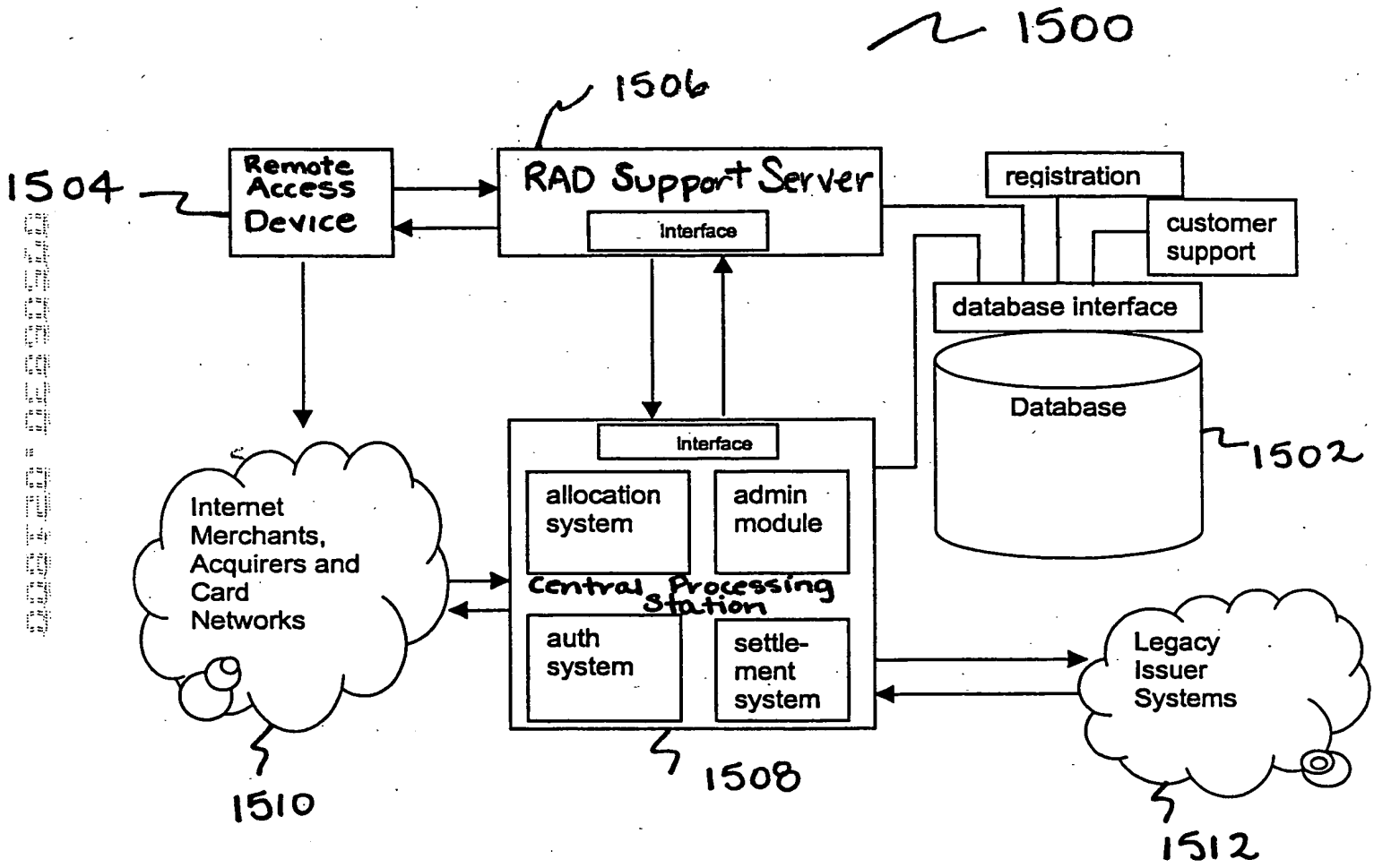
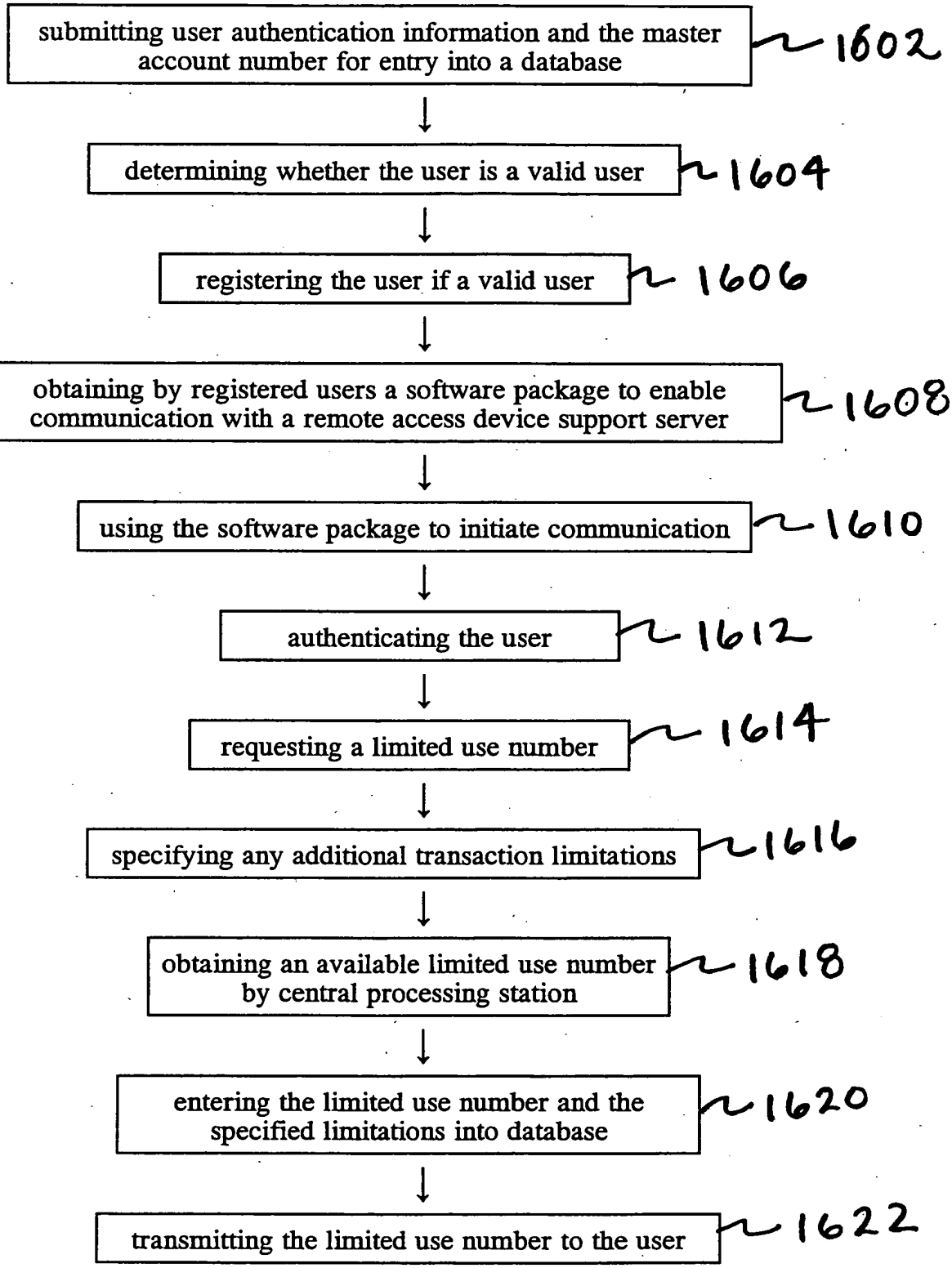

1500
1506
1504
Remote Access Device
RAD Support Server
Interface
registration
customer support
database interface
Database
1502
Interface
allocation system
admin module
Central Processing Station
auth system
settle-ment system
Internet Merchants, Acquirers and Card Networks
Legacy Issuer Systems
1510
1508
1512

FIG. 15

FIG. 16


submitting user authentication information and the master account number for entry into a database
1602
determining whether the user is a valid user
1604
registering the user if a valid user
1606
obtaining by registered users a software package to enable communication with a remote access device support server
1608
using the software package to initiate communication
1610
authenticating the user
1612
requesting a limited use number
1614
specifying any additional transaction limitations
1616
obtaining an available limited use number by central processing station
1618
entering the limited use number and the specified limitations into database
1620
transmitting the limited use number to the user
1622